

AMENDMENTS TO THE CLAIMS

Claim 1. (Currently amended) A bone growth composition, comprising:

- (a) a substrate comprising a material chosen from the group consisting of collagen, fibrin, alginate and mixtures thereof;
- (b) a bone growth protein;
- (c) a source of calcium; and,
- (d) a source of phosphate,

wherein said composition ~~comprises an acidic pH capable of enhancing bone growth protein induced bone formation when said composition is implanted in a mammal at a site in need of bone growth~~ has a pH less than 5.

Claim 2. (Currently amended) A bone growth composition, comprising:

- (a) a substrate comprising a material chosen from the group consisting of collagen, fibrin, alginate and mixtures thereof;
- (b) a bone growth protein; and,
- (c) a salt composition consisting essentially of calcium hydrogen phosphate dihydrate,

wherein the bone growth composition ~~comprises an acidic pH capable of enhancing bone growth protein induced bone formation, when said composition is implanted in a mammal at a site in need of bone growth~~ has a pH less than 5.

Claim 3. (Currently amended) A bone growth composition for implantation into a mammal, comprising:

- (a) a substrate comprising a material chosen from the group consisting of collagen, fibrin, alginate and mixtures thereof;
- (b) a bone growth protein; and,
- (c) a salt composition consisting essentially of one or more acidic calcium phosphate salts,

wherein the bone growth composition comprises a pH between about 4 and about 7 capable of enhancing bone growth protein induced bone formation, when said composition is implanted into a mammal has a pH less than 5.

Claim 4. (Previously presented) A bone growth composition as claimed in Claim 1, wherein the source of calcium is at least one acidic calcium phosphate salt.

Claim 5. (Previously presented) A bone growth composition as claimed in Claim 4, wherein the source of calcium is at least one acidic calcium phosphate salt selected from the group consisting of calcium monophosphate, calcium hydrogen phosphate, and calcium pyrophosphate.

Claim 6. (Original) A bone growth composition as claimed in Claim 1, wherein the source of phosphate is a sodium phosphate salt.

Claim 7. (Previously presented) A bone growth composition as claimed in Claim 1, wherein the substrate comprises collagen.

Claim 8. (Original) A bone growth composition as claimed in Claim 1, wherein the bone growth protein is selected from the group consisting of purified bone growth factors, recombinantly produced bone growth factors and mixtures thereof.

Claim 9. (Withdrawn) A bone growth composition as claimed in Claim 8 wherein the bone growth protein comprises a transforming growth factor β (TGF- β) superfamily protein.

Claim 10. (Original) A bone growth composition as claimed in Claim 8 wherein the bone growth protein comprises Bone Protein.

Claims 11-23. (Cancelled)

Claim 24. (Currently amended) A bone growth composition, comprising:

- (a) a collagen substrate;
- (b) a bone growth protein;
- (c) a source of calcium; and,
- (d) a source of phosphate,

wherein said composition, ~~comprises a pH in the range of 4.5 - 6.5, and is capable of enhancing bone growth protein induced bone formation when implanted at a site in need of bone growth has a pH less than 5.~~

Claims 25-27. (Cancelled)

Claim 28. (Currently amended) A bone growth composition, comprising:

- (a) a substrate comprising a material selected from the group consisting of collagen, fibrin, alginate and mixtures thereof;
- (b) a bone growth protein selected from the group consisting of at least one TGF- β superfamily protein; and
- (c) an acidic calcium phosphate salt composition selected from the group consisting of calcium monophosphate, calcium hydrogen phosphate, calcium pyrophosphate, and mixtures thereof,

wherein, the bone growth composition ~~comprises a pH between about 5 and about 6.8 capable of enhancing bone growth protein induced bone formation when the composition is implanted at a site in need of bone growth has a pH less than 5.~~

Claim 29. (Previously presented) The bone growth composition of claim 28, wherein the acidic calcium phosphate salt composition consists essentially of calcium hydrogen phosphate.

Claims 30-31. (Cancelled)

Claim 32. (Previously presented) The bone growth composition of claim 1 wherein said calcium source is about 1 - 85% by weight of the composition.

Claim 33. (Previously presented) The bone growth composition of claim 1 wherein said phosphate source is about 1 - 75% by weight of the composition.

Claim 34. (Previously presented) The bone growth composition of claim 1 wherein said collagen is selected from the group consisting of Type I collagen, Type II collagen, Type III collagen, and Type IV collagen, and mixtures thereof.

Claim 35. (Previously presented) The bone growth composition of claim 34 wherein said collagen comprises Type I bovine tendon atelopeptide collagen.

Claim 36. (Previously presented) The bone growth composition of claim 34 comprising about 0.5 - 20% by weight collagen.

Claim 37. (Previously presented) The bone growth composition of claim 36 comprising about 3 - 5% by weight collagen.

Claim 38. (Previously presented) The bone growth composition of claim 24 wherein said calcium source is about 1 - 85% by weight of the composition.

Claim 39. (Previously presented) The bone growth composition of claim 24 wherein said phosphate source is about 1 - 75% by weight of the composition.

Claim 40. (Previously presented) The bone growth composition of claim 24 wherein said collagen is selected from the group consisting of Type I collagen, Type II collagen, Type III collagen, and Type IV collagen, and mixtures thereof.

Claim 41. (Previously presented) The bone growth composition of claim 40 wherein said collagen comprises Type I bovine tendon atelopeptide collagen.

Claim 42. (Previously presented) The bone growth composition of claim 40 comprising about 0.5 - 20% by weight collagen.

Claim 43. (Previously presented) The bone growth composition of claim 42 comprising about 3 - 5% by weight collagen.

Claim 44. (Previously presented) The composition of claim 1 comprising about 4% collagen by weight and about 4% calcium hydrogen diphosphate by weight.

Claim 45. (Previously presented) The composition of claim 2 wherein the substrate comprises collagen.

Claim 46. (Previously presented) The composition of claim 3 wherein the substrate comprises collagen.

Claim 47. (Previously presented) The composition of claim 1 wherein said acidic pH comprises a pH in the range of 4.5 to 6.5.

Claim 48. (Previously presented) The composition of claim 1, wherein said enhanced bone formation comprises an enhanced histologic score.